UNITED STATES PATENT AND TRADEMARK OFFICE

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OGILVY RENAULT LLP
1981 MCGILL COLLEGE AVENUE
SUITE 1600
MONTREAL, QC H3A2Y3
CANADA

EXAMINER
HALIYUR, VENKATESH N

ART UNIT	PAPER NUMBER
2619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)
Office Action Summary		10/662,400	PHELPS ET AL.
		Examiner	Art Unit
		VENKATESH HALIYUR	2619

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>18 April 2008</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-27 (1-9,11-12,19-20 canceled),</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>13,16-18 and 21-27</u> is/are rejected.
7)☒ Claim(s) <u>10,14 and 15</u> is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The amendment filed on 04/18/2008 with respect rejection of claims 1-20 has

been considered and is ineffective to overcome the references. However the

amendments necessitated a new ground(s) of rejection in view of Humblet et al and a

newly found reference. Therefore the rejection of claims communicated via prvious

office action has been withdrawn. Rejection follows.

2.   Claims 10, 13-18, 21-27 are still pending in the application. Claims 1-9, 11-12,

19-20 are canceled.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

        Claims 16-18 are rejected under 35 U.S.C. 112, first paragraph, as failing

to comply with the written description requirement. The claim(s) contains subject

matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 16-18, these claims recite the limitation of "software being stored on a computer-readable medium and comprising executable instruction code for:" however, this limitation is not found in the original disclosures and at best in Para 0033 of the specification where it refers to "workstation 19 (refer Fig 1) that executes network management software" can be found or in para 0035 it refers to as "an exercise function encoded in software" can be found but no support for computer-readable medium or storage mechanism (memory, RAM.. etc..) can be found in the specification for the claimed limitation of "software being stored on a computer-readable medium and comprising executable instruction code for". Therefore appropriate corrections are required for these claims or these claims must be canceled.

Claim Objections

4.   Claim 18 is objected to because of the following informalities:

Regarding claim 18, In lines 4-5 of claim 18, examiner respectfully suggests applicant(s) to modify the limitation to read as "sending a pre-emptive switch request message through the protection channel to direct unprotected traffic ..." in order to correct this minor grammatical error.

Appropriate corrections are required to claims 18.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 16-18, 22-27, are rejected under 35 U.S.C. 103(a) as being unpatentable

over Humblet et al [US Pat: 6,992,978] in view of Khalilzadeh et al. [US Pat:

2004/0179472].

Regarding claim 16, Humblet et al in the invention of "Method and System for

Path Protection in a Communications Network" disclosed a protection switch processor

(fabric controller, 6A) of an optical network that supports protected traffic and extra

traffic at predefined grades of service **(preemptable and non-preemptable service,**

col 2, lines 52-67, col 3, lines 1-17) using pre-provisioned working and protection

channels **(paths WP and PP in Figs 1-4, col 5, lines 43-67, col 6, lines 1-18)**, the

protection switch processor executing under control of software for applying a protection

access policy for controlling access to each protection channel of the network, the

software being stored on a computer-readable medium and comprising executable

instruction code for **(col 8, lines 5-27)**: determining a priority value associated with a

protection switch request message for switching protected traffic from a working

channel to its associated protection channel **(col 6, lines 19-24)**; determining an

occupant priority value associated with the protection channel by determining a service

priority value associated with the protection channel **(high and low priority traffic, col

6, lines 25-34)**; comparing the priority value associated with the protection switch

request message to the occupant priority value, generating the protection switch

request when a bandwidth of the working channel to be switched is greater than an

unoccupied portion of the request priority value of the protection switch request is less

than or equal to the occupant priority value of the protection channel **(determine the

range of priority levels over the protection channel, col 5, lines 31-67, col 6, lines

1-39, Figs 3-4)**, but fails to positively disclose refusing the protection switch request and

determining a service priority value associated with unprotected traffic within the

protection channel. However, Khalilzadeh et al. in the invention of "Shared Path

Protection Method and System" disclosed a method for refusing the protection switch

request when a bandwidth of the working channel to be switched is greater than an

unoccupied portion of the request priority value of the protection switch request is less

than or equal to the occupant priority value of the protection channel and determining

the priority level of the unprotected traffic **(low priority traffic over the protected

channel)** in a protected channel by determining a service priority value associated with

in the protection channel **(determine the priority of the signal over the protection

channel, para 0066)**.

Therefore it would have been obvious for one of the ordinary skill in the art at the

time the invention was made to use the methods of refusing the protection switch

request and determining a service priority value associated with unprotected traffic

within the protection channel and determining the priority level of the unprotected traffic

in a protected channel by determining a service priority value associated with in the

protection channel as taught by Khalilzadeh et al in the system of Humblet et al. to

include determining an occupant priority value associated with the protection channel by

determining a service priority value associated with unprotected traffic within the

protection channel. One is motivated as such in order to efficiently initiate switching of

high priority traffic without interrupting the high priority traffic service **(Khalilzadeh et al.,**

para 0004).

Regarding claim 17, Humblet et al disclosed admitting the protection switch

request if the protection channel is idle **(no preemption of traffic on the protection**

link is needed), or the occupant priority value associated with the protection channel is

lower than the priority value associated with the protection switch request message **(col**

6, lines 4-17).

Regarding claim 18, Humblet et al disclosed and sending a pre-empted switch

request message through the protection channel to direct unprotected traffic being

transported through the protection channel to relinquish the data transport capacity of

the protection channel **(preempt the protection path, col 6, lines 29-39)**.

Regarding claim 21, Humblet et al disclosed in an optical network including

predetermined protection channels for transport of protected traffic during a failover, a

method for controlling access to each protection channel **(col 5, lines 31-48, Fig 1)**, the

method comprising: assigning one of a predetermined set of at least two service priority

values **(high and low priority traffic, col 2, lines 52-67, col 3, lines 1-17)** to each flow

of unprotected traffic being transported through at least one protection path of the

network **(no preemption of traffic on the protection link is needed, col 5, lines 49-**

67, col 6,lines 1-2, Fig 2); assigning one of a predetermined set of request priority

values to each protection switch request for switching protected traffic from a working

channel **(WP)** to its associated protection channel **(PP, col 6, lines 3-18, Fig 3)**; and

generating a protection switch request when a bandwidth of the working channel to be

switched is greater than an unoccupied portion of the protection channel, and the

request priority value of the protection switch request is less than or equal to the service

priority value of unprotected traffic being transported through the protection channel

(determine the range of priority levels over the protection channel, col 5, lines 31-

57, col 6,lines 1-39, Figs 3-4), but fails to positively disclose refusing the protection

switch request and determining a service priority value associated with unprotected

traffic within the protection channel. However, Khalilzadeh et al. in the invention of

"Shared Path Protection Method and System" disclosed a method for refusing the

protection switch request when a bandwidth of the working channel to be switched is

greater than an unoccupied portion of the request priority value of the protection switch

request is less than or equal to the occupant priority value of the protection channel and

determining the priority level of the unprotected traffic **(low priority traffic over the**

protected channel) in a protected channel by determining a service priority value

associated with in the protection channel **(determine the priority of the signal over**

the protection channel, para 0066).

Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the methods of refusing the protection switch request and determining a service priority value associated with unprotected traffic within the protection channel and determining the priority level of the unprotected traffic in a protected channel by determining a service priority value associated with in the protection channel as taught by Khalilzadeh et al in the system of Humblet et al. to include determining an occupant priority value associated with the protection channel by determining a service priority value associated with unprotected traffic within the protection channel. One is motivated as such in order to efficiently initiate switching of high priority traffic without interrupting the high priority traffic service **(Khalilzadeh et al., para 0004).**

Regarding claim 22, Humblet et al disclosed wherein the predetermined set of at least two service priority values comprises a first service priority value corresponding to a pre-emptable class of service, and a second service priority value corresponding to a non-pre-emptable traffic class of service **(col 5, lines 31-42).**

Regarding claims 23-24, Humblet et al disclosed the first service priority value is higher than at least one of the predetermined set of request priority values and wherein the first service priority value is higher than request priority values associated with any one or more of a degraded condition of the working channel; and a test protection switch initiated by network management **(col 6, lines 29-39, col 11, lines 42-63, Fig 7).**

Regarding claim 25, Humblet et al disclosed wherein the second service priority value is higher than a request priority value associated with a signal fail condition of the working channel **(col 6, lines 19-28)**.

Regarding claim 26, Humblet et al disclosed in an optical network including predetermined protection channels for transport of protected traffic during a failover, a method for handling a protection switch request **(Figs 1-4, 6A/B)**, the method comprising: receiving the protection switch request for switching protected traffic from a working channel to its associated protection channel **(col 5, lines 31-48, Fig 1)**, the protection switch request including a request priority value **(high and low priority traffic, col 2, lines 52-67, col 3, lines 1-17)**; determining a current occupancy of the protection channel **(col 6, lines 19-24)**, the occupancy being one of idle, occupied by unprotected traffic associated with one of a plurality of grades of service **(preemptable and non-preemptable service)**, and occupied by protected traffic switched from a working channel with a specific request priority **(paths WP and PP in Figs 1-4, col 5, lines 43-67, col 6, lines 1-18)**; and generating the protection switch request when a bandwidth of the working channel to be switched is greater than an unoccupied portion of the protection channel **(col 3, lines 2-16)**, and the request priority value of the protection switch request is less than or equal to the service priority value of unprotected traffic being transported through the protection channel **(determine the range of priority levels over the protection channel, col 5, lines 31-67, col 6, lines 1-39, Figs 3-4)**, but fails to positively disclose refusing the protection switch request and determining a service priority value associated with unprotected traffic within the

protection channel. However, Khalilzadeh et al. in the invention of "Shared Path

Protection Method and System" disclosed a method for refusing the protection switch

request when a bandwidth of the working channel to be switched is greater than an

unoccupied portion of the request priority value of the protection switch request is less

than or equal to the occupant priority value of the protection channel and determining

the priority level of the unprotected traffic **(low priority traffic over the protected**

channel) in a protected channel by determining a service priority value associated with

in the protection channel **(determine the priority of the signal over the protection**

channel, para 0066).

　　　　Therefore it would have been obvious for one of the ordinary skill in the art at the

time the invention was made to use the methods of refusing the protection switch

request and determining a service priority value associated with unprotected traffic

within the protection channel and determining the priority level of the unprotected traffic

in a protected channel by determining a service priority value associated with in the

protection channel as taught by Khalilzadeh et al in the system of Humblet et al. to

include determining an occupant priority value associated with the protection channel by

determining a service priority value associated with unprotected traffic within the

protection channel. One is motivated as such in order to efficiently initiate switching of

high priority traffic without interrupting the high priority traffic service **(Khalilzadeh et al.,**

para 0004).

　　　　Regarding claim 27, Humblet et al disclosed admitting the protection switch

request if the priority value of the switch request is greater than the service priority value

associated with the unprotected traffic being transported through the protection channel

(col 5, lines 31-37).

Response to Arguments

7.   Applicant's argument, see remarks filed on 9/28/2007 with respect to rejection of

claims 1-27 have been considered but are moot in view of the new ground(s) of

rejection.

        With respect to applicant's argument that Humblet et al does not teach the

limitations of specific grade of service associated with any given flow of unprotected

traffic is used to control access to the protection channel that is occupied by that traffic

flow and assigning priority value to each traffic flow within a protection channel, and

permits or denies a request to switch protected traffic into that proection channel based

on the unused capacity of the protection channel and the priority values assigned to

each traffic flow already within that channel, However, in Humblet et al disclosed

assigning different priority values over the protection path flows (col 2 lines 59-67, col 3,

lines 1-17), and further disclosed where non-preemptable or preemptable traffic flowing

over working and protection paths (specific grades of service) can be switched to

protection path or not based on the capacity of the protection path based on the priority

values of the traffic (col 5, lines 31-48).

Allowable Subject Matter

8.   Claims 10, 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art including patents and publications fail to teach the claim limitations as disclosed in the instant application related to protection switching method the steps of refusing the protection switch request comprises pending the request so that if the unprotected traffic being transported through the protection channel subsequently releases the protection channel, a network element that issued the priority switch request is notified and forwarding a protection switch request pended message along the protection channel if the occupied portion of the data transport capacity of the protection channel subsequently becomes unoccupied, forwarding a message along the protection channel indicating that the protection channel is idle and admitting the protection switch request by forwarding a pre-empted switch request message through the protection channel to request the unprotected traffic being transported through the protection channel to relinquish the data transport capacity protection channel.

Conclusion

9.   Any inquiry concerning this communication or earlier communications should be directed to the attention to Venkatesh Haliyur whose phone number is 571-272-8616.

The examiner can normally be reached on Monday-Friday from 9:00AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached @ (571)-272-7884. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2600 or fax to 571-273-8300.

10.   Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

/Venkatesh Haliyur/

Examiner, Art Unit 2619

/Edan Orgad/

Supervisory Patent Examiner, Art Unit 2619